

Technical Procedures for Examining Unknown Deceased Friction Ridge Prints

1 Scope

These procedures are intended for use by personnel who examine captured friction ridge prints of unknown deceased individuals. Postmortem prints obtained from human remains may be compared with antemortem exemplars and/or searched in the Next Generation Identification System for the purpose of verifying or establishing identity.

2 Equipment/Materials/Reagents

Magnifiers

Ridge Counters (or dissecting needles)

Microscopes/Macroscopes

Digital Imaging Systems

Next Generation Identification System workstation

Equipment providing adequate lighting

3 Procedure

3.1 Processing Friction Ridge Skin in Laboratory

The individual conducting examinations will refer to the FBI Friction Ridge Discipline Processing Manual, Standard Operating Procedures for Processing Human Remains for techniques to acquire friction ridge prints, as needed.

When processing submitted hands, fingers, feet or any human remains containing friction ridge skin, the following procedures must be followed:

- Record the totality of items received (e.g., left hand with all fingers attached or right hand with digits #1 and #3 missing and two disassociated fingers).
- Record all attempted activities or processing techniques used to obtain friction ridge prints (even those that were not successful) and record the results from those attempts.

- Record appropriate information on the physical print record(s) (per the FBI Friction Ridge Discipline Processing Manual, Standard Operating Procedures for Processing Human Remains) or have this information associated with digital print records after capture.
- Initially, the examiner may record as few friction ridge prints as necessary from the remains and attempt to identify. If the individual is not identified, an attempt must be made to record all friction ridge skin detail on the hands, to include palms. It is at the examiner's discretion whether to record all detail ahead of time to attempt identification or to record the minimum necessary to attempt identification.
- The examiner may print the feet as dictated by the circumstances. These will be handled similarly as described for friction ridge prints from the hand listed above.
- Place physical postmortem print record(s) obtained directly from human remains in a biohazard storage bag.
- Digital copies of all recorded friction ridge prints deemed suitable for capture must be retained in the case record. Personnel will refer to the FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for Digital Images for guidance.
- After digital copies are made, the examiner will not retain the physical print records obtained directly from human remains and will either destroy these records or return them to the contributor as secondary evidence. If the examiner chooses to dispose of the physical print and/or records, they must document the disposition in the case notes.

3.2 Examination of Captured or Submitted Postmortem Prints

All physical postmortem records obtained directly from human remains will be treated as biohazard material.

A digital copy of all captured and/or submitted friction ridge prints deemed suitable for capture must be retained in the case record. Personnel will refer to the FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for Digital Images for guidance.

If an identification is effected to an antemortem or non-duplicate postmortem record, a legible reproduction of the record(s) used to effect the identification must be retained in the case record.

When conducting examinations on non-original submitted unknown deceased prints, personnel will proceed with the expectation that the information provided is a true and accurate representation of the original, unless otherwise indicated.

3.2.1 Associated and Disassociated Portions or Records

If intact remains are received or the friction ridge print records are contained on a single media (e.g., a fingerprint card or a single digital image), they are assumed to be associated to a single individual unless proven otherwise. In the event that records are contained across multiple media (e.g., multiple cards or multiple digital images via email) or non-intact human remains are received, the recordings or remains are considered disassociated unless the friction ridge prints were captured in the Laboratory, remains were separated in the Laboratory, and/or documentation exists to confirm the submitted records or remains are associated. Wherever possible, the examiner should inter-compare records to ensure prints across multiple media are connected.

An attempt must be made to identify all disassociated portions or records. If multiple disassociated portions or records are examined, an attempt must be made to identify at least one print from each portion or record. Some examples include:

- If both hands are received, are separated from the torso, and there is no confirmation that the hands originated from a single individual, the portions are disassociated and an attempt must be made to identify at least one finger or the palm from each hand.
- If multiple fingers are submitted individually and there is confirmation that the fingers originated from a single individual, the portions are associated and an attempt must be made to identify at least one of the submitted fingers.
- If a single fingerprint card with ten fingers recorded is submitted digitally, the prints are connected and an attempt must be made to identify at least one of the recorded prints.
- If a disc containing multiple images connected with a single individual is submitted, the images are associated and an attempt must be made to identify at least one of the captured prints among the associated images.
- If an email containing multiple images is received and there is no confirmation that the images originated from a single individual, the images are disassociated and an attempt must be made to identify at least one print in each image.

3.2.2 Assessment and Examination of Records

All unknown deceased prints are treated as standard intentionally recorded prints per Section 5.1.4 in the FBI Friction Ridge Discipline Operations Manual, Technical Procedures for Examining Friction Ridge Prints.

For cases where no potential antemortem identity is provided by the contributor, the examiner should assess for Next Generation Identification System quality prints only, and the case record will show which prints were searched in the Next Generation Identification System.

If manual comparisons against an antemortem record are required, the prints will be examined per the applicable sections in the FBI Friction Ridge Discipline Operations Manual, Technical Procedures for Examining Friction Ridge Prints.

3.3 Searching Captured or Submitted Postmortem Prints

The examiner will refer to the FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for the Next Generation Identification System for guidance on conducting searches and reference the following sections for specific procedures for all unknown deceased prints to be searched in the Next Generation Identification System.

When the captured or submitted postmortem prints are not identified and the unknown deceased is estimated to be born before 1983, the examiner will submit a copy of the record to the Criminal Justice Information Services Division to be searched in the manual file. The examiner can only submit the record if it contains either nine or ten captured fingerprints (so a pattern classification can be determined). Any record not meeting these requirements will not be sent, however exceptions may be granted by the Next Generation Identification System Program Manager.

3.3.1 Ten Print Record Search(es)

The examiner may conduct a Ten Print search of the recordings in the Next Generation Identification System criminal and civil files and the Special Population Cognizant file, when appropriate.

If an antemortem record is identified, the verification process will be completed and the examiner will cease searches.

If a postmortem record from the Criminal Justice Information Services Division files is identified, the examiner will do the following:

- If the postmortem record from the Criminal Justice Information Services Division files is an exact copy of the captured or submitted record, the examiner will record the match in his/her case notes and no verification is required. Searches will continue.
- If the postmortem record from the Criminal Justice Information Services Division files is a different recording of the same individual recorded on the captured or submitted record, the prints will be identified and the verification process will be completed. Searches will continue.

3.3.2 Searches of a Single Friction Ridge Print(s)

If no identification is effected to an antemortem record, the examiner will conduct searches of the single friction ridge print(s) as follows with all Next Generation Identification System quality individual print recordings until all such recordings are searched or an identification is effected with antemortem prints.

- Both the criminal and civil files will be searched. Other files may be searched as the case warrants.
- The examiner will search against all ten fingers for each fingerprint search.
- In the case of multiple recordings of the same finger, the examiner will ensure all areas of the end joint of the finger are searched within the system.
- Palm prints, if submitted or captured, will be searched in the system.
- Captured or submitted postmortem prints searched as single friction ridge prints will not be added to the Unsolved Latent File. Exceptions may be granted by the Next Generation Identification System Program Manager.

If an antemortem print is identified, the examiner will do the following:

- The examiner will identify the print in the Next Generation Identification System and retain the screenshot.
- If the submitted recordings are associated, only 1 finger/palm needs to be identified, the verification process will be completed, and the examiner will cease searches.
- If the submitted recordings are disassociated, all portions will be identified, the verification process will be completed, and the examiner will cease searches.
- Any outstanding searches will be addressed as written in the FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for the Next Generation Identification System.

If a postmortem print is identified, the examiner will do the following:

- If the postmortem record is from the Criminal Justice Information Services Division files and is an exact copy of the captured or submitted record, the examiner will record the match in his/her case notes and no verification is required. The remaining candidates will be compared and searches will continue.
- The first print that is identified to a non-duplicate record must be marked as identified in the Next Generation Identification System and the screenshot retained. The verification process will be completed for the identification. Comparisons will continue until the required number of unique candidates are addressed and searches will continue.
- For additional identifications to the same Universal Control Number, the examiner may choose “No Decision” or leave the result blank so the search can be closed. The remaining candidates will be compared as normal and searches will continue.
 - If the examiner chooses instead to identify the Universal Control Number, he/she must retain the Next Generation Identification System screenshot. Additional verifications are not necessary. The remaining candidates must still be compared.

3.3.3 Searching Macerated or Desiccated Recorded Prints

In some cases, the friction skin will expand or shrink to a point that the abnormal size of the recorded prints will affect the search. Gloved skin is typically larger than the normal size while charred skin is typically smaller. In these instances, when a print is searched as-is and no

identification is effected, the examiner will need to use the Next Generation Identification System ridge counting tool as described in the FBI Friction Ridge Discipline Operations Manual, Procedures for the Next Generation Identification System.

3.3.4 Sharing Unknown Deceased Prints

Captured or submitted postmortem records may be shared with other agencies, through the Next Generation Identification System Program Manager or designee, as applicable. The examiner will refer to the FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for the Next Generation Identification System for guidance.

4 Dover Mortuary, Incidents, and Criminal Justice Information Services Division Assistance

Examiners conducting exams for Dover Mortuary will follow procedures and documentation requirements established for and by the Dover Mortuary and those relevant paragraphs documented in this standard and the FBI Friction Ridge Discipline Operations Manual, Technical Procedures for Examining Friction Ridge Prints and the Next Generation Identification System as well as the FBI Friction Ridge Discipline Processing Manual, Standard Operating Procedures for Processing Human Remains. No FBI Laboratory numbers are assigned for Dover cases and no FBI Laboratory reports are generated. All resulting records are provided to the Department of Defense Office of the Armed Forces Medical Examiner System.

All incidents overseen by the Major Incident Management Program Manager will follow procedures and documentation guidelines established by the requesting agency and those relevant paragraphs documented in this standard as well as the relevant paragraphs in the FBI Friction Ridge Discipline Operations Manual, Technical Procedures for Examining Friction Ridge Prints and the FBI Friction Ridge Discipline Processing Manual, Standard Operating Procedures for Processing Human Remains. No FBI Laboratory numbers are assigned for major incidents and no FBI Laboratory reports are generated. The Major Incident Management Program Manager will produce a closure memorandum listing the results of all FBI Laboratory friction ridge print examinations resulting from the incident, unless those results have been previously reported in writing. In instances where the results have been previously reported in writing, the closure memo will inform the requesting agency that examinations are complete. Copies of any associated records will be retained by the Major Incident Management Program Manager. The Major Incident Management Program Manager will maintain a complete record of each major incident.

Examiners conducting individual fingerprint searches of unknown deceased individuals for the Criminal Justice Information Services Division Special Processing Center will follow procedures and documentation requirements established for and by the Criminal Justice Information Services Division Special Processing Center and those relevant paragraphs documented in this standard and the FBI Friction Ridge Discipline Operations Manual, Technical Procedures for

Examining Friction Ridge Prints and the Next Generation Identification System. No FBI Laboratory numbers are assigned for the Criminal Justice Information Services Division Special Processing Center cases and no FBI Laboratory reports are generated. All results, including the identity of the examiner conducting the examinations, are provided to the Criminal Justice Information Services Division Special Processing Center for dissemination and supporting records retained.

5 National Institute of Justice's National Missing and Unidentified Persons System

The National Institute of Justice's National Missing and Unidentified Persons System is a national centralized repository and resource center for missing persons and unidentified decedent records. The National Institute of Justice's National Missing and Unidentified Persons System maintains a database of the unknown deceased fingerprint records submitted from medical examiners and coroners across the United States. To date, the National Institute of Justice's National Missing and Unidentified Persons System does not have access to search any fingerprint databases, or the ability to submit fingerprint records to Criminal Justice Information Services Division. In an effort to help identify these unknown deceased individuals, a modified process is employed to search the prints against the Next Generation Identification System and provide positive results to the contributors. Any identification details will be provided to the agency who contributed the records to the National Institute of Justice's National Missing and Unidentified Persons System.

When conducting examinations on non-original submitted unknown deceased prints, personnel will proceed with the expectation that the information provided is a true and accurate representation of the original, unless otherwise indicated.

5.1 Case Receipt and Examinations

5.1.1 The Major Incident Management Program Manager or designee will facilitate the receipt of all cases from the National Institute of Justice's National Missing and Unidentified Persons System. No FBI Laboratory numbers will be assigned for the National Institute of Justice's National Missing and Unidentified Persons System cases and no FBI Laboratory reports will be generated, except as described in Section 5.2.2. Searches in the Next Generation Identification System will be conducted under a specific Latent Case Number designated by the Major Incident Management Program Manager.

5.1.2 The examiner will review the case images, encode relevant Next Generation Identification System suitable prints for searching, and search the prints per the relevant sections above. The encodings within the Next Generation Identification System will serve as the examiner's analysis markings and, due to the nature of the examination, written analysis records are not required.

5.1.3 Exclusions or inconclusive decisions will be appropriately recorded in the Next Generation Identification System only. Nothing further will be done with the record, and National Institute of Justice's National Missing and Unidentified Persons System will be notified that no identification resulted from the automated searches.

5.1.4 When an identification decision is reached, the result will be recorded in the Next Generation Identification System and a copy of the marked minutia will be retained in the appropriate digital storage location.

5.1.5 All identified prints will be verified. Records for the verification will be retained in the appropriate digital storage location. No results will be reported without the successful completion of the required quality step(s).

5.1.6 A record of requests will be serialized in Sentinel annually and will include information needed to locate associated records in the Next Generation Identification System.

5.2 Reporting Identifications to Contributors

5.2.1 The National Institute of Justice's National Missing and Unidentified Persons System database will be used to identify the original contributor. The National Institute of Justice's National Missing and Unidentified Persons System is only notified when an identification is made, and that the original contributor is notified of the identification details. A record of the notification will be retained in the appropriate digital storage location.

5.2.2 If the contributor requests an official report, he/she will notify the Major Incident Management Program Manager or designee. An incoming communication will be required from the contributor and the examiner will follow all appropriate Laboratory practices and unit procedures when answering the request.

6 Standards and Controls

Not applicable.

7 Sampling

Not applicable.

8 Calculations

Not applicable.

9 Measurement Uncertainty

Not applicable.

10 Limitations

Not applicable.

11 Safety

Not applicable

12 References

FBI Laboratory Quality Assurance Manual. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Laboratory Safety Manual. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for Digital Images. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Friction Ridge Discipline Operations Manual, Technical Procedures for Examining Friction Ridge Prints. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Friction Ridge Discipline Operations Manual, Standard Operating Procedures for the Next Generation Identification System. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Friction Ridge Discipline Processing Manual, Standard Operating Procedures for Processing Human Remains. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Friction Ridge Discipline Quality Assurance Manual, Procedures for Case Acceptance. Federal Bureau of Investigation, Laboratory Division. Latest Revision.

Uhle, A.J. (2010). Fingerprints and Human Identification. In D. Senn and P. Stimson (Eds.), Forensic Dentistry, Second Edition (pp. 79-101). Boca Raton: CRC Press.

Rev. #	Date	History
7	02/07/18	Abbreviations removed throughout as well as minor wording, grammar, and punctuation changes. Sections 7 through 7.2.2 moved from the FBI Latent Print Unit, Practices for Case Acceptance. Section 5.1 through Section 5.3.4, updated, clarified and reorganized. Appendix A removed.
8	07/15/21	Changed Latent Print Units to Friction Ridge Discipline. Section 3 and Section 4 moved to end and Sections renumbered throughout. Section 2, added lighting equipment. Section 3.2.1, added "via email". Section 3.2.2, changed known records to intentionally record prints. Section 3.3, added clarification. Section 3.3.1, clarified search. Section 3.3.2, clarified palm print expectations. Section 5.1.4, Section 5.1.5, and Section 5.2.1, generalized electronic storage.

Approval

Redact - Signatures on File

Friction Ridge Discipline
Technical Leader

Date: 07/14/2021

Latent Print Operations
Unit Chief

Date: 07/14/2021

Latent Print Support Unit
Chief

Date: 07/14/2021

Scientific and Biometrics
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